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SEP 18 2006

Atty Dkt. No.: 10971150-2
USSN: 10/080,641

REMARKS

In view of the following remarks, the Examiner is requested to allow claims 32, 33, 36-38, and 43-61, the only claims pending and under examination in this application.

Claims 38, 47, 53, 60 and 61 have been amended to clarify the claim language. Accordingly, no new matter has been added.

As no new matter has been added by way of these amendments, entry thereof by the Examiner is respectfully requested.

As an initial matter the Applicants thank the Examiner for acknowledging the patentability of Claims 59 to 60.

Claim Objections

Claim 61 has been objected to for failing to further limit the subject matter of a previous claim. Claim 61 has been amended thereby rendering this objection moot. The Applicants, therefore, respectfully request that this objection be withdrawn.

Claim Rejections 35 U.S.C. § 112, second paragraph

Claims 38, 47-51, 53, 56, 58 and 60 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 38, 47, 53 and 60 have been amended thereby rendering this rejection moot. The Applicants, therefore, respectfully request that this rejection be withdrawn.

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Claim Rejections – 35 U.S.C. § 103

Claims 32, 33, 37, 38, 43, 45-50 and 52-58 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kaye (USPN 3,850,525) and/or Modell *et al.* (USPN 6,826,422 B1) in view of Schultz *et al.* (USPN 6,180,415) and Zhai *et al.* (USPN 6,476,382).

According to the M.P.E.P. § 706.02 (j), to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

With respect to Claims 32, 33, 37, 38, 47-50 and 52-58 an element of the rejected claims is a detector system that is configured for positioning at least one detector at a site for receiving a constructively interfering emission from an array having a reflective coating.

Kaye and Modell are deficient because neither reference teaches an apparatus with a detector system that is configured for positioning at least one detector at a site for receiving a constructively interfering emission from an array having a reflective coating. Schultz is cited solely for its disclosure of an interrogation system that includes a processor and therefore falls to remedy the deficiencies of Kaye and Modell. Accordingly, the Office relies upon Zhai to remedy the deficiencies of Kaye, Modell and Shultz.

The Office asserts that Zhai discloses a detection system having a detector that is positioned for receiving constructive interference. The Office, therefore, asserts that it

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would have been obvious to modify the detection angles of Kaye or Modell in view of Zhai so as to detect constructive interference.

The Applicants respectfully disagree and contend that the combined references do not teach or suggest every element of the Applicants' claimed apparatus, namely, the recited combination fails to teach or suggest a detector system that is configured for positioning at least one detector at a site for receiving a constructively interfering emission from an array.

The system disclosed in Zhai is for measuring a focused spot of an optical energy beam based on the groove diffraction caused by scanning the beam with a scanner relative to a grating. The spot itself is derived from an optical energy beam that is focused at a position of a grating. The spot size is obtained by determining a position error signal that indicates the position of the focused spot relative to a groove in the grating as the energy beam scans across the surface of the grating. See column 3, lines 40 to 45. The position error signal is determined by comparing whether each detector of a split detector senses constructive or destructive interference of incident radiation from the grating at a given position.

Zhai, therefore, is not scanning a biopolymer feature nor detecting radiation from a scanned feature. Rather, Zhai is simply measuring the size of a focused energy beam. Accordingly, to the extent that Zhai discloses the detection of constructive radiation it is for measuring the size of a focused spot of optical energy. Therefore, if Zhai were to be used to modify Kaye and/or Modell in view of Schultz at best one would derive an apparatus that is configured for measuring the size of a focused spot using a grating prior to scanning an array. This is not what is being claimed by the Applicants.

The Office, however, argues that the positioning element recited in the Applicants' claims is merely an intended use and as such has not given patentable weight to the recited element. The Applicants respectfully disagree and contend that

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because the Applicants' system is configured for positioning at least one detector at a site for receiving a constructively interfering emission from an array, the system has the ability to find a site for receiving a constructively interfering emission and positioning a detector at this site. There is nothing in the cited references that teach or suggest a system that is capable of finding a site for receiving a constructively interfering emission and positioning a detector at that site.

Accordingly, in view of the above, the recited combination fails to teach or suggest a detector system that is configured for positioning at least one detector at a site for receiving a constructively interfering emission from an array. Therefore, because the recited combination fails to teach or suggest every element of the Applicants' claims, namely the Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 32, 33, 37, 38, 43, 45-50 and 52-58 be withdrawn.

With respect to Claims 43, 45 and 46 an element of the claims is a detector that can be moved to align with different detection angles so as to detect different emitted light wavelengths at respective different detection angles. The Office asserts that Modell discloses that the detector may be moved in the Z direction parallel to the optical axis and, therefore, Modell discloses that the detector may be moved to be aligned with different detection angles. In support of this assertion, the Office cites column 29, lines 9 to 16, set forth below:

The detector assembly, or in some embodiments a specific element of the assembly such as an objective lens, may be 10
 caused to move in a direction parallel to the optical axis of the assembly with a driving mechanism 186 under the control of controller 201 (through control line 197), so as to adjust the z position, or depth, of the volume elements probed by the array microprobe system, in a manner similar 15
 to that described above.

As can be seen with reference to the above excerpt, Modell discloses that the detector assembly may be moved in the z position so as to adjust the depth. As this

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movement is parallel to the optical axis, the optical axis does not change and therefore the detection angle does not change. Because the detection angle does not change the Applicants contend that cited excerpt does not support the Office's assertion and that none of Kaye, Modell, Shultz or Zhai teach or suggest a detector that can be moved to align with different detection angles so as to detect different emitted light wavelengths at respective different detection angles.

In view of the above, the Applicants contend that a *prima facie* case of obviousness has not been established because the recited combination fails to teach all the elements of the Applicants' claimed apparatus. Accordingly, the Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 32, 33, 37, 38, 43, 45-50 and 52-58 be withdrawn.

Claims 43, 44, 46 and 57 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kaye and/or Modell *et al.* in view of Schultz *et al.*

As set forth above, an element Claim 43, and the claims dependent thereon, is a detector that can be moved to align with different detection angles so as to detect different emitted light wavelengths at respective different detection angles. The Office asserts that Modell discloses that the detector may be moved in the Z direction parallel to the optical axis and, therefore, Modell discloses that the detector may be moved to be aligned with different detection angles. In support of this assertion, the Office cites column 29, lines 9 to 16, set forth below:

The detector assembly, or in some embodiments a specific element of the assembly such as an objective lens, may be caused to move in a direction parallel to the optical axis of the assembly with a driving mechanism 186 under the control of controller 201 (through control line 197), so as to adjust the z position, or depth, of the volume elements probed by the array microprobe system, in a manner similar to that described above.

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As can be seen with reference to the above excerpt, Modell discloses that the detector assembly may be moved in the z position so as to adjust the depth. As this movement is parallel to the optical axis, the optical axis does not change and therefore the detection angle does not change. Because the detection angle does not change the Applicants contend that cited excerpt does not support the Office's assertion and that none of Kaye, Modell or Shultz teach or suggest a detector that can be moved to align with different detection angles so as to detect different emitted light wavelengths at respective different detection angles.

In view of the above, the Applicants contend that a *prima facie* case of obviousness has not been established because the recited combination fails to teach all the elements of the Applicants' claimed apparatus. The Applicants, therefore, respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 43, 44, 46 and 57 be withdrawn.

Claim 53 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kaye and/or Modell *et al.* in view of Schultz *et al.* as applied to claim 43 above and further in view of Zhai *et al.*

Claim 53 depends from Claim 43. An element Claim 43 is a detector that can be moved to align with different detection angles so as to detect different emitted light wavelengths at respective different detection angles. As set forth above, a *prima facie* case of obviousness has not been established because the recited combination fails to teach all the elements of the Applicants' claimed apparatus. Accordingly, the Applicants contend that a *prima facie* case of obviousness has not been established and respectfully request that the 35 U.S.C. § 103(a) rejection of Claim 53 be withdrawn.

Claims 36 and 51 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kaye and/or Modell *et al.* in view of Schultz *et al.* and Zhai *et*

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al. as applied to Claims 32 and 48 above and further in view of Zeleny *et al.* (USPN 6,215,894).

As set forth above, a *prima facie* case of obviousness has not been established because Kaye and/or Modell, Schultz and Zhai fail to teach all the elements of the Applicants' claimed apparatus. As Zeleny was cited for its disclosure of biopolymer arrays having bar codes, it fails to remedy the deficiencies of Kaye and/or Modell, Schultz and Zhai. Accordingly, the Applicants contend that a *prima facie* case of obviousness has not been established and respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 36 and 51 be withdrawn.

Claim 45 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kaye and/or Modell *et al.* in view of Schultz *et al.* as applied to claim 43 above and further in view of Zeleny *et al.*

Claim 45 depends from Claim 43. An element Claim 43 is a detector that can be moved to align with different detection angles so as to detect different emitted light wavelengths at respective different detection angles. As set forth above, a *prima facie* case of obviousness has not been established because the cited combination fails to teach every element of the rejected claims, namely, a detector that can be moved to align with different detection angles so as to detect different emitted light wavelengths at respective different detection angles. Accordingly, in view of the above, the Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 43, 44, 46 and 57 be withdrawn.

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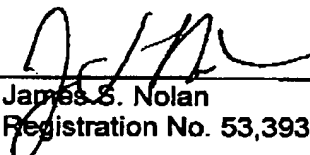
CONCLUSION

Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone John Brady at (408) 553-3584.


The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078, order number 10971150-2.

Respectfully submitted,

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